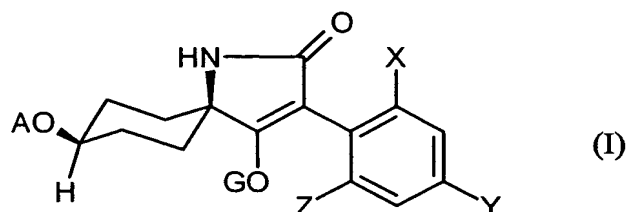


Patent claims

1. Compounds of the formula (I)



5 in which

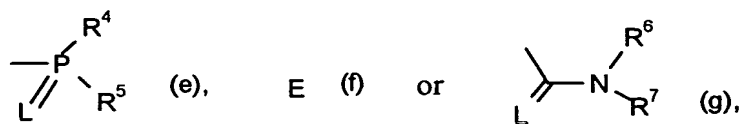
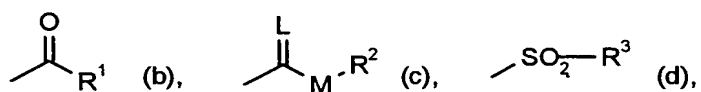
X represents C₂-C₄-alkyl,

Y represents halogen and

Z represents C₁-C₄-alkyl,

A represents alkyl,

10 G represents hydrogen (a) or represents



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur,

15 M represents oxygen or sulphur,

R¹ represents in each case optionally substituted alkyl, alkenyl, alkoxy-alkyl, alkylthioalkyl or polyalkoxyalkyl or represents cycloalkyl or

heterocyclyl, each of which is optionally substituted by halogen, alkyl or alkoxy, or represents in each case optionally substituted phenyl, hetaryl, phenyl-C₁-C₄-alkyl, phenyl-C₁-C₂-alkenyl or hetaryl-C₁-C₄-alkyl,

5 R² represents in each case optionally halogen-substituted alkyl, alkenyl, alkoxyalkyl or polyalkoxyalkyl or represents in each case optionally substituted cycloalkyl, phenyl or benzyl,

10 R³, R⁴ and R⁵ independently of one another represent in each case optionally halogen-substituted alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio or cycloalkylthio or represent in each case optionally substituted phenyl, benzyl, phenoxy or phenylthio,

15 R⁶ and R⁷ independently of one another represent hydrogen, represent in each case optionally halogen-substituted alkyl, cycloalkyl, alkenyl, alkoxy, alkoxyalkyl, represent in each case optionally substituted phenyl or benzyl, or together with the N atom to which they are attached form an optionally substituted cycle which optionally contains oxygen or sulphur.

2. Compounds of the formula (I) according to Claim 1 in which

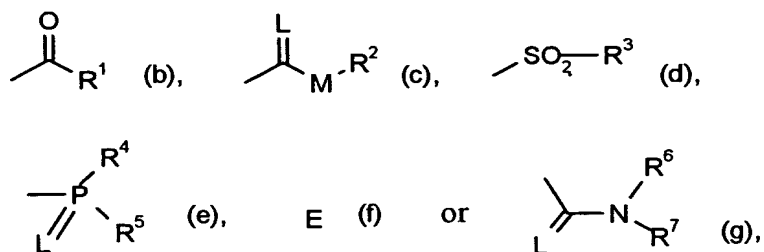
20 X represents ethyl, n-propyl or n-butyl,

 Y represents halogen,

 Z represents methyl, ethyl or n-propyl,

 A represents C₁-C₆-alkyl,

 G represents hydrogen (a) or represents one of the groups



in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

5 M represents oxygen or sulphur,

R¹ represents C₁-C₂₀-alkyl, C₂-C₂₀-alkenyl, C₁-C₆-alkoxy-C₁-C₆-alkyl, C₁-C₆-alkylthio-C₁-C₆-alkyl or poly-C₁-C₄-alkoxy-C₁-C₄-alkyl, each of which is optionally mono- to heptasubstituted by halogen, mono- or disubstituted by

cyano, monosubstituted by -CO-R¹¹, -C=N-OR¹¹, -CO₂R¹¹ or CO-N^{R¹¹ R^{11'}},

10 or represents C₃-C₈-cycloalkyl which is optionally mono- to trisubstituted by halogen, C₁-C₄-alkyl or C₁-C₄-alkoxy and in which optionally one or two not directly adjacent methylene groups are replaced by oxygen and/or sulphur,

15 represents phenyl, phenyl-C₁-C₂-alkyl or phenyl-C₁-C₂-alkenyl, each of which is optionally mono- to trisubstituted by halogen, cyano, nitro, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkyl, C₁-C₆-haloalkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulphinyl or C₁-C₆-alkylsulphonyl,

represents 5- or 6-membered hetaryl which is optionally mono- or disubstituted by halogen or C₁-C₆-alkyl and has one or two heteroatoms from the group consisting of oxygen, sulphur and nitrogen,

20 R² represents C₁-C₂₀-alkyl, C₂-C₂₀-alkenyl, C₁-C₆-alkoxy-C₂-C₆-alkyl or poly-C₁-C₆-alkoxy-C₂-C₆-alkyl, each of which is optionally mono- to trisubstituted by halogen,

represents C₃-C₈-cycloalkyl which is optionally mono- or disubstituted by halogen, C₁-C₆-alkyl or C₁-C₆-alkoxy, or

represents phenyl or benzyl, each of which is optionally mono- to trisubstituted by halogen, cyano, nitro, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkyl or C₁-C₆-haloalkoxy,

R³ represents C₁-C₈-alkyl which is optionally mono- or polysubstituted by halogen or represents phenyl or benzyl, each of which is optionally mono- or disubstituted by halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano or nitro,

R⁴ and R⁵ independently of one another represent C₁-C₈-alkyl, C₁-C₈-alkoxy, C₁-C₈-alkylamino, di-(C₁-C₈-alkyl)amino, C₁-C₈-alkylthio or C₂-C₈-alkenylthio, each of which is optionally mono- to trisubstituted by halogen, or represent phenyl, phenoxy or phenylthio, each of which is optionally mono- to trisubstituted by halogen, nitro, cyano, C₁-C₄-alkoxy, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-haloalkylthio, C₁-C₄-alkyl or C₁-C₄-haloalkyl,

R⁶ and R⁷ independently of one another represent hydrogen, represent C₁-C₈-alkyl, C₃-C₈-cycloalkyl, C₁-C₈-alkoxy, C₃-C₈-alkenyl or C₁-C₈-alkoxy-C₂-C₈-alkyl, each of which is optionally mono- to trisubstituted by halogen, represent phenyl or benzyl, each of which is optionally mono- to trisubstituted by halogen, C₁-C₈-alkyl, C₁-C₈-haloalkyl or C₁-C₈-alkoxy, or together represent a C₃-C₆-alkylene radical which is optionally mono- or disubstituted by C₁-C₄-alkyl and in which optionally one methylene group is replaced by oxygen or sulphur,

R¹¹ represents hydrogen or represents C₁-C₆-alkyl, C₃-C₆-alkenyl, C₃-C₆-alkynyl or C₁-C₄-alkoxy-C₂-C₄-alkyl, each of which is optionally mono- to trisubstituted by halogen, or represents C₃-C₆-cycloalkyl which is optionally mono- or disubstituted by halogen, C₁-C₂-alkyl or C₁-C₂-alkoxy and in which optionally one or two not directly adjacent methylene groups are replaced by oxygen or represents phenyl or phenyl-C₁-C₃-alkyl, each of which is

optionally mono- or disubstituted by halogen, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, cyano or nitro,

R¹¹ represents hydrogen, C₁-C₆-alkyl or C₃-C₆-alkenyl.

3. Compounds of the formula (I) according to Claim 1, in which

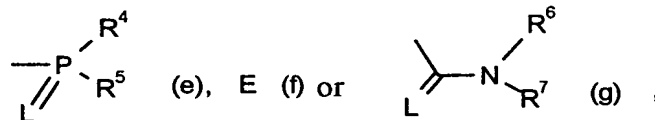
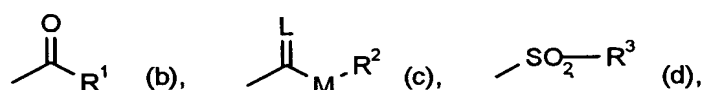
5 X represents ethyl or n-propyl,

Y represents chlorine or bromine,

Z represents methyl or ethyl,

A represents methyl, ethyl, n-propyl, n-butyl or isobutyl,

G represents hydrogen (a) or represents one of the groups



10

in which

E represents a metal ion equivalent or an ammonium ion,

L represents oxygen or sulphur and

M represents oxygen or sulphur,

15 R¹ represents C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₁-C₄-alkoxy-C₁-C₂-alkyl, C₁-C₄-alkylthio-C₁-C₂-alkyl or poly-C₁-C₃-alkoxy-C₁-C₂-alkyl, each of which is optionally mono- to pentasubstituted by fluorine or chlorine, monosubstituted by cyano, monosubstituted by -CO-R¹¹, -C=N-OR¹¹ or CO₂R¹¹, or represents C₃-C₆-cycloalkyl which is optionally mono- or
20 disubstituted by fluorine, chlorine, C₁-C₂-alkyl or C₁-C₂-alkoxy and in which

optionally one or two not directly adjacent methylene groups are replaced by oxygen,

5 represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, C₁-C₄-alkoxy, C₁-C₄-alkylthio, C₁-C₄-alkylsulphonyl, C₁-C₄-alkylsulphinyl, C₁-C₂-haloalkyl or C₁-C₂-haloalkoxy,

represents pyrazolyl, thiazolyl, pyridyl, pyrimidyl, furanyl or thienyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine or C₁-C₂-alkyl,

10 R² represents C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₁-C₄-alkoxy-C₂-C₄-alkyl or poly-C₁-C₄-alkoxy-C₂-C₄-alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine,

represents C₃-C₇-cycloalkyl which is optionally monosubstituted by C₁-C₂-alkyl or C₁-C₂-alkoxy or

15 represents phenyl or benzyl, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, cyano, nitro, C₁-C₄-alkyl, methoxy, trifluoromethyl or trifluoromethoxy,

20 R³ represents C₁-C₄-alkyl which is optionally mono- to trisubstituted by fluorine or chlorine or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine, C₁-C₄-alkyl, C₁-C₄-alkoxy, trifluoromethyl, trifluoromethoxy, cyano or nitro,

25 R⁴ and R⁵ independently of one another represent C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-alkylamino, di-(C₁-C₆-alkyl)amino, C₁-C₆-alkylthio or C₃-C₄-alkenylthio, each of which is optionally mono- to trisubstituted by fluorine or chlorine, or represent phenyl, phenoxy or phenylthio, each of which is optionally mono- or disubstituted by fluorine, chlorine, bromine, nitro, cyano, C₁-C₃-alkoxy, trifluoromethoxy, C₁-C₃-alkylthio, C₁-C₃-alkyl or trifluoromethyl,

5 R^6 and R^7 independently of one another represent hydrogen, represent C_1 - C_6 -alkyl, C_3 - C_6 -cycloalkyl, C_1 - C_4 -alkoxy, C_3 - C_6 -alkenyl or C_1 - C_6 -alkoxy- C_2 - C_6 -alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine, represent phenyl which is optionally mono- or disubstituted by fluorine, chlorine, bromine, trifluoromethyl, C_1 - C_4 -alkyl or C_1 - C_4 -alkoxy, or together represent a C_5 - C_6 -alkylene radical which is optionally mono- or disubstituted by methyl and in which optionally one methylene group is replaced by oxygen,

10 R^{11} represents C_1 - C_4 -alkyl, C_3 - C_4 -alkenyl, C_3 - C_4 -alkynyl or C_1 - C_4 -alkoxy- C_2 - C_3 -alkyl or represents C_3 - C_6 -cycloalkyl in which optionally one methylene group is replaced by oxygen.

4. Compounds of the formula (I) according to Claim 1 in which

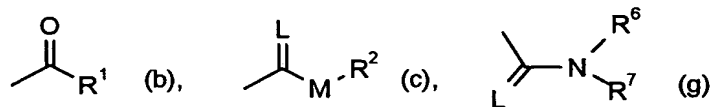
X represents ethyl or n-propyl,

Y represents chlorine or bromine,

15 Z represents methyl or ethyl,

A represents methyl, ethyl or n-propyl,

G represents hydrogen (a) or represents one of the groups



in which

20 L represents oxygen and

M represents oxygen or sulphur,

R^1 represents C_1 - C_6 -alkyl, C_2 - C_6 -alkenyl, C_1 - C_2 -alkoxy- C_1 - C_2 -alkyl, C_1 - C_2 -alkylthio- C_1 - C_2 -alkyl or poly- C_1 - C_2 -alkoxy- C_1 - C_2 -alkyl, each of which is optionally mono- to trisubstituted by fluorine or chlorine, or represents

cyclopropyl, cyclopentyl or cyclohexyl, each of which is optionally monosubstituted by fluorine, chlorine, methyl, ethyl or methoxy,

represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, ethyl, n-propyl, isopropyl, methoxy, ethoxy, methylthio, ethylthio, methylsulphinyl, ethylsulphinyl, methylsulphonyl, ethylsulphonyl, trifluoromethyl or trifluoromethoxy,

represents furanyl, thienyl or pyridyl, each of which is optionally monosubstituted by chlorine, bromine or methyl,

R^2 represents C_1 - C_8 -alkyl, C_2 - C_6 -alkenyl or C_1 - C_3 -alkoxy- C_2 - C_3 -alkyl, cyclopentyl or cyclohexyl,

or represents phenyl or benzyl, each of which is optionally monosubstituted by fluorine, chlorine, bromine, cyano, nitro, methyl, methoxy, trifluoromethyl or trifluoromethoxy,

R^6 represents hydrogen, represents C_1 - C_4 -alkyl, C_3 - C_6 -cycloalkyl or allyl, represents phenyl which is optionally monosubstituted by fluorine, chlorine, bromine, methyl, methoxy or trifluoromethyl,

R^7 represents methyl, ethyl, n-propyl, isopropyl or allyl,

R^6 and R^7 together represent a C_5 - C_6 -alkylene radical in which optionally one methylene group is replaced by oxygen.

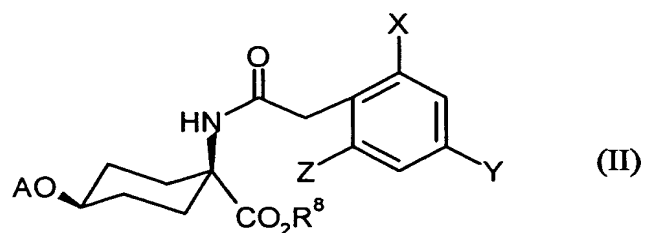
5. Process for preparing compounds of the formula (I) according to Claim 1, characterized in that, to obtain

A) compounds of the formula (I-a)

in which

A, X, Y and Z are as defined above,

compounds of the formula (II),



in which

A, X, Y and Z are as defined above

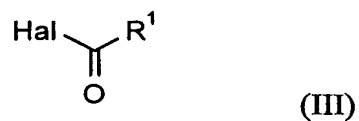
and

R^8 represents alkyl,

are condensed intramolecularly in the presence of a diluent and in the presence of a base,

- (B) compounds of the formula (I-b) shown above in which A, R^1 , X, Y and Z are as defined above, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are reacted

α) with acid halides of the formula (III),



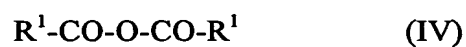
in which

R^1 is as defined above and

Hal represents halogen

or

- β) with carboxylic anhydrides of the formula (IV),



in which

R^1 is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

- (C) compounds of the formula (I-c) shown above in which A, R^2 , M, X, Y and Z are as defined above and L represents oxygen, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are in each case reacted

with chloroformic esters or chloroformic thioesters of the formula (V),



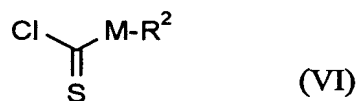
in which

R^2 and M are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

- (D) compounds of the formula (I-c) shown above in which A, R^2 , M, X, Y and Z are as defined above and L represents sulphur, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are in each case reacted

α) with chloromonothioformic esters or chlorodithioformic esters of the formula (VI),



in which

M and R^2 are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

or

β) with carbon disulphide and then with compounds of the formula (VII),



5 in which

R^2 is as defined above and

Hal represents chlorine, bromine or iodine,

if appropriate in the presence of a diluent and if appropriate in the presence of a base,

10 (E) compounds of the formula (I-d) shown above in which A, R^3 , X, Y and Z are as defined above, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are in each case reacted

with sulphonyl chlorides of the formula (VIII),



15 in which

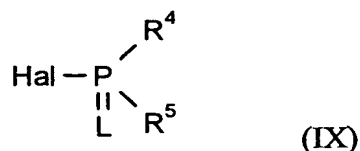
R^3 is as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

20 (F) compounds of the formula (I-e) shown above in which A, L, R^4 , R^5 , X, Y and Z are as defined above, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are in each case reacted

with phosphorus compounds of the formula (IX),

- 127 -



in which

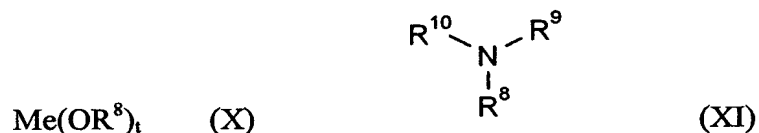
L, R⁴ and R⁵ are as defined above and

Hal represents halogen,

5 if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

(G) compounds of the formula (I-f) shown above in which A, E, X, Y and Z are as defined above, compounds of the formula (I-a) in which A, X, Y and Z are as defined above are in each case reacted

10 with metal compounds or amines of the formulae (X) or (XI), respectively,



in which

Me represents a mono- or divalent metal,

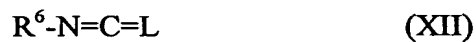
t represents the number 1 or 2 and

15 R⁸, R⁹, R¹⁰ independently of one another represent hydrogen or alkyl,

if appropriate in the presence of a diluent,

(H) compounds of the formula (I-g) shown above in which A, L, R⁶, R⁷, X, Y and Z are as defined above, compounds of the formula (I-a) shown above in which A, X, Y and Z are as defined above are in each case reacted

20 α) with isocyanates or isothiocyanates of the formula (XII),

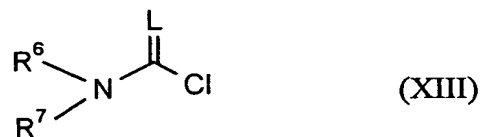


in which

R^6 and L are as defined above,

if appropriate in the presence of a diluent and if appropriate in the presence of a catalyst, or

- 5 B) with carbamoyl chlorides or thiocarbamoyl chlorides of the formula (XIII),

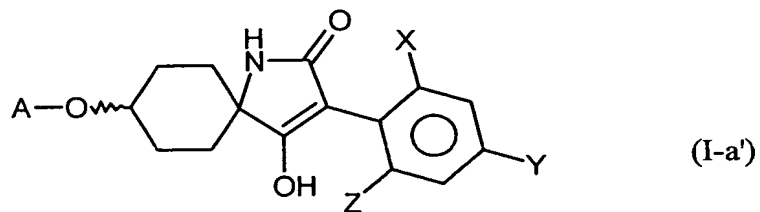


in which

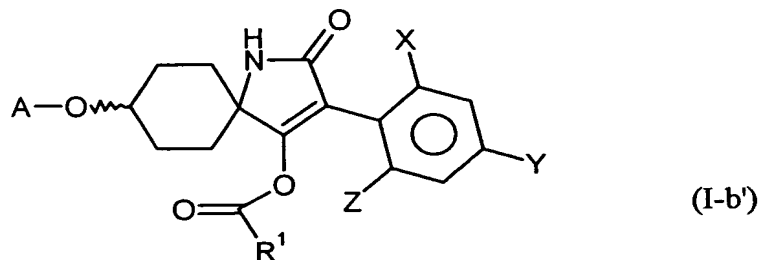
L, R^6 and R^7 are as defined above,

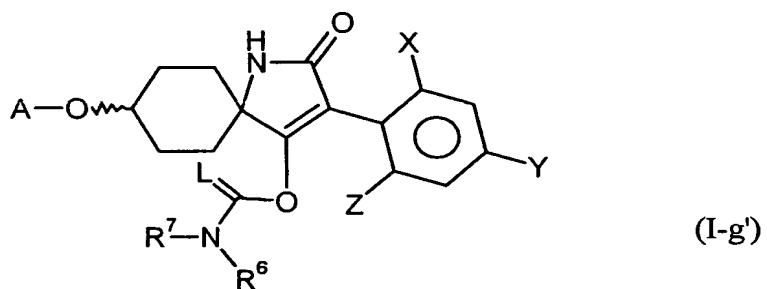
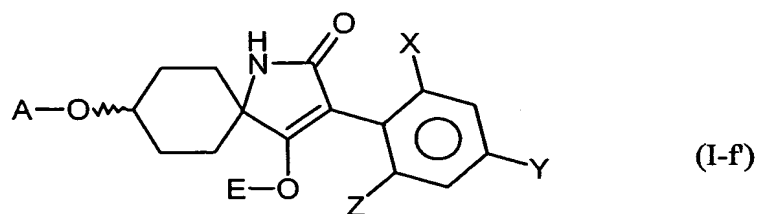
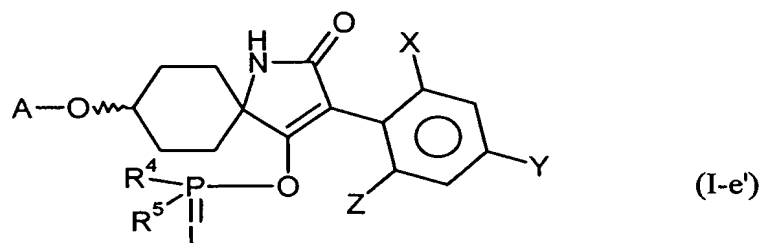
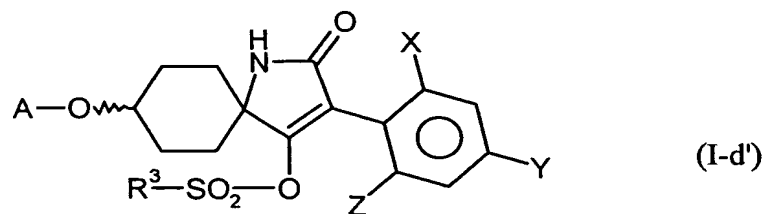
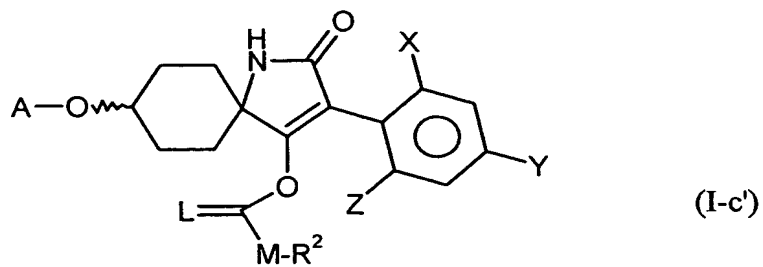
10 if appropriate in the presence of a diluent and if appropriate in the presence of an acid binder,

- (I) compounds of the formulae (I-a) to (I-g) shown above, cis/trans isomer mixtures of formulae (I-a') to (I-g'), known, for example, from EP-A-835 243,



15





in which

A, E, L, M, X, Y, Z, R¹, R², R³, R⁴, R⁵, R⁶ and R⁷ are as defined above and are separated using physical separation processes, such as, for example, column chromatography or fractional crystallization,

(J) compounds of the formula (I-a), compounds of the formulae (I-b), (I-c), (I-d), (I-e), (I-f) or (I-g) in which A, E, L, M, X, Y, Z, R¹, R², R³, R⁴, R⁵, R⁶ and R⁷ are as defined above are hydrolysed using, for example, aqueous bases and then acidified.

- 5 6. Use of compounds of the formula (I) according to Claim 1 for preparing pesticides and/or herbicides.
7. Pesticides and/or herbicides, characterized in that they comprise at least one compound of the formula (I) according to Claim 1.
8. Method for controlling animal pests and/or unwanted vegetation, characterized in that compounds of the formula (I) according to Claim 1 are allowed to act on pests and/or their habitat.
- 10 9. Use of compounds of the formula (I) according to Claim 1 for controlling animal pests and/or unwanted vegetation.
10. Process for preparing pesticides and/or herbicides, characterized in that compounds of the formula (I) according to Claim 1 are mixed with extenders and/or surfactants.
- 15 11. Composition, comprising an effective amount of a combination of active compounds comprising
 - (a') at least one substituted cyclic ketoenol of the formula (I) in which A, G, X, Y and Z are as defined above
 - 20 and
 - (b') at least one crop plant compatibility-improving compound from the following group of compounds:

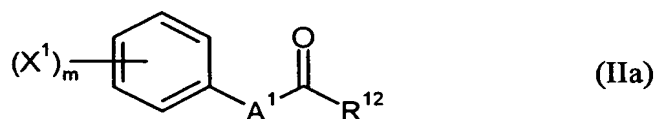
4-dichloroacetyl-1-oxa-4-azaspiro[4.5]decane (AD-67, MON-4660), 1-dichloroacetylhexahydro-3,3,8a-trimethylpyrrolo[1,2-a]pyrimidin-6(2H)-one (dicyclonon, BAS-145138), 4-dichloroacetyl-3,4-dihydro-3-methyl-2H-1,4-benzoxazine (benoxacor), 1-methylhexyl 5-chloroquinoline-8-oxyacetate (cloquintocet-mexyl - cf. also related compounds in EP-A-86750, EP-A-94349, EP-A-191736, EP-A-
- 25

492366), 3-(2-chlorobenzyl)-1-(1-methyl-1-phenylethyl)urea (cumyluron), α -(cyanomethoximino)phenylacetonitrile (cyometrinil), 2,4-dichlorophenoxyacetic acid (2,4-D), 4-(2,4-dichlorophenoxy)butyric acid (2,4-DB), 1-(1-methyl-1-phenylethyl)-3-(4-methylphenyl)urea (daimuron, dymron), 3,6-dichloro-2-methoxybenzoic acid (dicamba), S-1-methyl 1-phenylethyl piperidine-1-thiocarboxylate (dimepiperate), 2,2-dichloro-N-(2-oxo-2-(2-propenylamino)ethyl)-N-(2-propenyl)acetamide (DKA-24), 2,2-dichloro-N,N-di-2-propenylacetamide (dichlormid), 4,6-dichloro-2-phenylpyrimidine (fenclorim), ethyl 1-(2,4-dichlorophenyl)-5-trichloromethyl-1H-1,2,4-triazole-3-carboxylate (fenchlorazole-ethyl - cf. also related compounds in EP-A-174562 and EP-A-346620), phenylmethyl 2-chloro-4-trifluoromethylthiazole-5-carboxylate (flurazole), 4-chloro-N-(1,3-dioxolan-2-ylmethoxy)- α -trifluoroacetophenone oxime (fluxofenim), 3-dichloroacetyl-5-(2-furanyl)-2,2-dimethyloxazolidine (furilazole, MON-13900), ethyl 4,5-dihydro-5,5-diphenyl-3-isoxazolecarboxylate (isoxadifen-ethyl - cf. also related compounds in WO-A-95/07897), 1-(ethoxycarbonyl)ethyl 3,6-dichloro-2-methoxybenzoate (lactidichlor), (4-chloro-o-tolyloxy)acetic acid (MCPA), 2-(4-chloro-o-tolyloxy)propionic acid (mecoprop), diethyl 1-(2,4-dichlorophenyl)-4,5-dihydro-5-methyl-1H-pyrazole-3,5-dicarboxylate (mefenpyr-diethyl - cf. also related compounds in WO-A-91/07874), 2-dichloromethyl-2-methyl-1,3-dioxolane (MG-191), 2-propenyl 1-oxa-4-azaspiro[4.5]decane-4-carbodithioate (MG-838), 1,8-naphthalic anhydride, α -(1,3-dioxolan-2-ylmethoximino)phenylacetonitrile (oxabetrinil), 2,2-dichloro-N-(1,3-dioxolan-2-ylmethyl)-N-(2-propenyl)acetamide (PPG-1292), 3-dichloroacetyl-2,2-dimethyloxazolidine (R-28725), 3-dichloroacetyl-2,2,5-trimethyloxazolidine (R-29148), 4-(4-chloro-o-tolyl)butyric acid, 4-(4-chlorophenoxy)butyric acid, diphenylmethoxyacetic acid, methyl diphenylmethoxyacetate, ethyl diphenylmethoxyacetate, methyl 1-(2-chlorophenyl)-5-phenyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-methyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-isopropyl-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-(1,1-dimethylethyl)-1H-pyrazole-3-carboxylate, ethyl 1-(2,4-dichlorophenyl)-5-phenyl-1H-pyrazole-3-carboxylate (cf. also related compounds in EP-A-269806 and EP-A-333131), ethyl 5-(2,4-dichlorobenzyl)-2-isoxazoline-3-carboxylate, ethyl 5-phenyl-2-isoxazoline-3-carboxylate, ethyl 5-(4-fluorophenyl)-5-phenyl-2-isoxazoline-3-carboxylate (cf. also related compounds in WO-A-

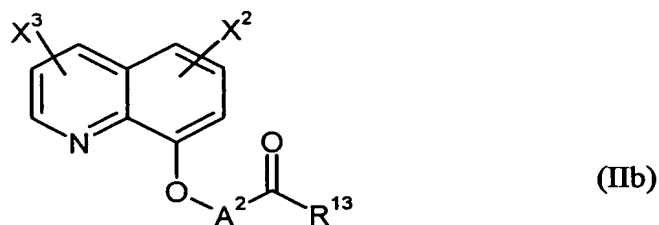
91/08202), 1,3-dimethylbut-1-yl 5-chloroquinoline-8-oxyacetate, 4-allyloxybutyl 5-chloroquinoline-8-oxyacetate, 1-allyloxyprop-2-yl 5-chloroquinoline-8-oxyacetate, methyl 5-chloroquinoxaline-8-oxyacetate, ethyl 5-chloroquinoline-8-oxyacetate, allyl 5-chloroquinoxaline-8-oxyacetate, 2-oxoprop-1-yl 5-chloroquinoline-8-oxyacetate, diethyl 5-chloroquinoline-8-oxymalonate, diallyl 5-chloroquinoxaline-8-oxymalonate, diethyl 5-chloroquinoline-8-oxymalonate (cf. also related compounds in EP-A-582198), 4-carboxychroman-4-ylacetic acid (AC-304415, cf. EP-A-613618), 4-chlorophenoxyacetic acid, 3,3'-dimethyl-4-methoxybenzophenone, 1-bromo-4-chloromethylsulphonylbenzene, 1-[4-(N-2-methoxybenzoylsulphamoyl)-phenyl]-3-methylurea (also known as N-(2-methoxybenzoyl)-4-[(methylaminocarbonyl)amino]benzenesulphonamide), 1-[4-(N-2-methoxybenzoylsulphamoyl)phenyl]-3,3-dimethylurea, 1-[4-(N-4,5-dimethylbenzoylsulphamoyl)phenyl]-3-methylurea, 1-[4-(N-naphthylsulphamoyl)-phenyl]-3,3-dimethylurea, N-(2-methoxy-5-methylbenzoyl)-4-(cyclopropylamino-carbonyl)benzenesulphonamide,

and/or one of the following compounds, defined by general formulae,

of the general formula (IIa)



or of the general formula (IIb)



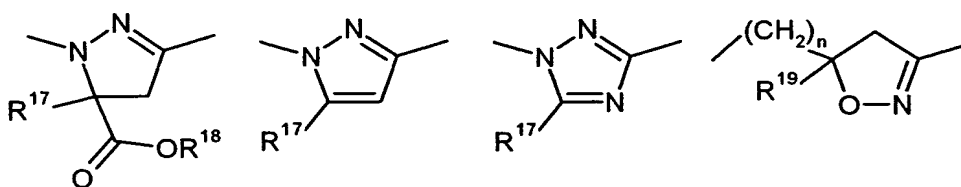
or of the formula (IIc)



where

m represents a number 0, 1, 2, 3, 4 or 5,

A¹ represents one of the divalent heterocyclic groupings shown below,



n represents a number 0, 1, 2, 3, 4 or 5,

A² represents optionally C₁-C₄-alkyl- and/or C₁-C₄-alkoxycarbonyl-substituted alkanediyl having 1 or 2 carbon atoms,

R¹² represents hydroxyl, mercapto, amino, C₁-C₇-alkoxy, C₁-C₆-alkenyloxy, C₁-C₆-alkenyloxy-C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylamino or di-(C₁-C₄-alkyl)amino,

R¹³ represents hydroxyl, mercapto, amino, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylamino or di-(C₁-C₄-alkyl)amino,

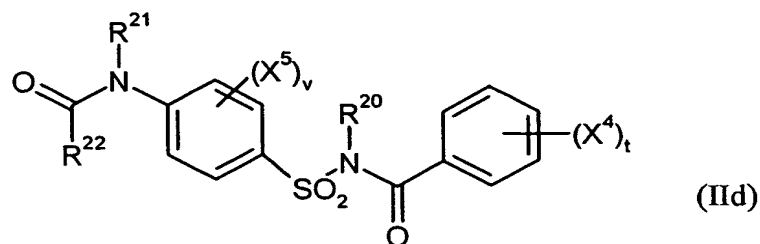
R¹⁴ represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C₁-C₄-alkyl,

R¹⁵ represents hydrogen, in each case optionally fluorine-, chlorine- and/or bromine-substituted C₁-C₆-alkyl, C₂-C₆-alkenyl or C₂-C₆-alkynyl, C₁-C₄-alkoxy-C₁-C₄-alkyl, dioxolanyl-C₁-C₄-alkyl, furyl, furyl-C₁-C₄-alkyl, thienyl, thiazolyl, piperidinyl, or optionally fluorine-, chlorine- and/or bromine- or C₁-C₄-alkyl-substituted phenyl,

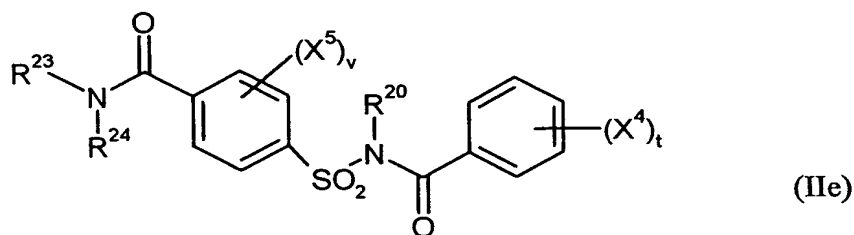
- 5 R^{16} represents hydrogen, in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1 - C_6 -alkyl, C_2 - C_6 -alkenyl or C_2 - C_6 -alkynyl, C_1 - C_4 -alkoxy- C_1 - C_4 -alkyl, dioxolanyl- C_1 - C_4 -alkyl, furyl, furyl- C_1 - C_4 -alkyl, thienyl, thiazolyl, piperidinyl, or optionally fluorine-, chlorine- and/or bromine- or C_1 - C_4 -alkyl-substituted phenyl, or R^{15} and R^{16} together also represent C_3 - C_6 -alkanediyl or C_2 - C_5 -oxaalkanediyl, each of which is optionally substituted by C_1 - C_4 -alkyl, phenyl, furyl, a fused benzene ring or by two substituents which, together with the C atom to which they are attached, form a 5- or 6-membered carbocycle,
- 10 R^{17} represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1 - C_4 -alkyl, C_3 - C_6 -cycloalkyl or phenyl,
- R^{18} represents hydrogen or optionally hydroxyl-, cyano-, halogen- or C_1 - C_4 -alkoxy-substituted C_1 - C_6 -alkyl, C_3 - C_6 -cycloalkyl or tri(C_1 - C_4 -alkyl)silyl,
- 15 R^{19} represents hydrogen, cyano, halogen, or represents in each case optionally fluorine-, chlorine- and/or bromine-substituted C_1 - C_4 -alkyl, C_3 - C_6 -cycloalkyl or phenyl,
- X^1 represents nitro, cyano, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy,
- 20 X^2 represents hydrogen, cyano, nitro, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy,
- X^3 represents hydrogen, cyano, nitro, halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy,

and/or the following compounds, defined by general formulae,

of the general formula (II_d)



or of the general formula (IIe)



where

- 5 t represents a number 0, 1, 2, 3, 4 or 5,
- v represents a number 0, 1, 2, 3, 4 or 5,
- R²⁰ represents hydrogen or C₁-C₄-alkyl,
- R²¹ represents hydrogen or C₁-C₄-alkyl,
- 10 R²² represents hydrogen, in each case optionally cyano-, halogen- or C₁-C₄-alkoxy-substituted C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylamino or di-(C₁-C₄-alkyl)amino, or in each case optionally cyano-, halogen- or C₁-C₄-alkyl-substituted C₃-C₆-cycloalkyl, C₃-C₆-cycloalkyloxy, C₃-C₆-cycloalkylthio or C₃-C₆-cycloalkylamino,
- 15 R²³ represents hydrogen, optionally cyano-, hydroxyl-, halogen- or C₁-C₄-alkoxy-substituted C₁-C₆-alkyl, in each case optionally cyano- or halogen-substituted C₃-C₆-alkenyl or C₃-C₆-alkynyl, or optionally cyano-, halogen- or C₁-C₄-alkyl-substituted C₃-C₆-cycloalkyl,
- R²⁴ represents hydrogen, optionally cyano-, hydroxyl-, halogen- or C₁-C₄-alkoxy-substituted C₁-C₆-alkyl, in each case optionally cyano- or halogen-substituted C₃-

5 C₆-alkenyl or C₃-C₆-alkynyl, optionally cyano-, halogen- or C₁-C₄-alkyl-substituted C₃-C₆-cycloalkyl, or optionally nitro-, cyano-, halogen-, C₁-C₄-alkyl-, C₁-C₄-haloalkyl-, C₁-C₄-alkoxy- or C₁-C₄-haloalkoxy-substituted phenyl, or together with R²³ represents in each case optionally C₁-C₄-alkyl-substituted C₂-C₆-alkanediyl or C₂-C₅-oxaalkanediyl,

X⁴ represents nitro, cyano, carboxyl, carbamoyl, formyl, sulphamoyl, hydroxyl, amino, halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy, and

10 X⁵ represents nitro, cyano, carboxyl, carbamoyl, formyl, sulphamoyl, hydroxyl, amino, halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₄-haloalkoxy.

12. Composition according to Claim 11 where the crop plant compatibility-improving compound is selected from the following group of compounds:

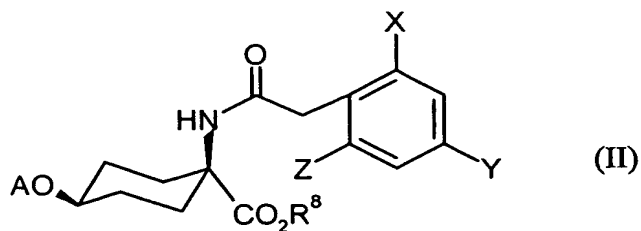
cloquintocet-mexyl, fenclorazole-ethyl, isoxadifen-ethyl, mefenpyr-diethyl, furilazole, fenclorim, cumyluron, dymron or the compounds IIe-5 or IIe-11.

15 13. Composition according to Claim 11 or 12 where the crop plant compatibility-improving compound is cloquintocet-mexyl or mefenpyr-diethyl.

14. Method for controlling unwanted vegetation, characterized in that a composition according to Claim 11 is allowed to act on the plants or their habitat.

15. Use of the composition according to Claim 11 for controlling unwanted vegetation.

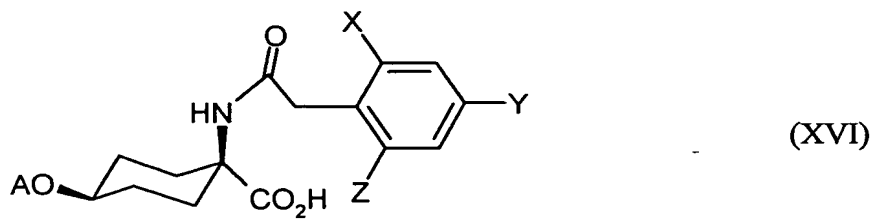
20 16. Compounds of the formula (II)



in which

A, X, Y, Z and R⁸ are as defined above.

17. Compounds of the formula (XVI)



in which

A, X, Y and Z are as defined above.